Assessing quality gap of university services

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Abstract

Purpose – The purpose of this paper is to determine the quality gap of university services in the behavioral science faculties of the University of Tehran (Iran).

Design/methodology/approach – In the current research, 300 students of five behavioral science faculties – Psychology and Educational Science, Social Science, Economics, Physical Education and Sport Science, Management, Entrepreneurship – in the University of Tehran (Iran), were chosen randomly and completed the SERVQUAL questionnaire. This questionnaire consists of two parts regarding customer’s perceptions and expectations about the quality of service. SERVQUAL questionnaire measures the five aspects of service which include assurance, responsiveness, empathy, reliability and tangibles. Therefore, the quality gap of the services of behavioral science faculties was determined according to differences between the students’ perceptions and expectations. In order to analyze research data, descriptive statistics, t-Student and ANOVA analysis were conducted.

Findings – The results demonstrated that in three of the five SERVQUAL dimensions (tangibles, reliability, and empathy), there was a negative quality gap (p < 0.05). Thus, improvements are needed across three above-mentioned dimensions. Also, there were no significant differences between perceptions and expectations of students based on their gender, degree and field of study.

Research limitations/implications – The current research was conducted among behavioral science faculties of the University of Tehran, so the results are limited to these faculties, not to the whole university.

Originality/value – There are limited researches that consider service quality in Iranian higher education. However, for the first time, the service quality of behavioral science faculties of the University of Tehran was measured by the SERVQUAL in this research.

Keywords Iran, Higher education, Service quality, University services, SERVQUAL, Quality gap

Paper type Research paper

1. Introduction

One of the determinants of success of an organization is how the customers perceived the resulting service quality (Mukesh et al., 2009, p. 212). The idea is that the service is good if perceptions meet or exceed expectations and problematic if perceptions fall below expectations (Ahmed and Shoeb, 2009, p. 18). So, filling the gaps between
customer perceptions and expectations about the service received is vital for customer satisfaction. As Matzler and Hinterhuber stated, more and more firms use satisfaction ratings as an indicator of performance for services and consequently an indicator of company’s future. Since service quality is a vital element in creating customer satisfaction, it also plays an important role in sustaining profit levels of companies (Baki et al., 2009, p. 106). Garvin states, “Consumers inferences about quality rather than the reality itself – can be critical” (Lam, 2002, p. 43); they also perceive service quality as a multidimensional concept (Markovic and Raspor, 2010, p. 196). Thus, it becomes important to assess how customers evaluate service quality (Bayraktaroglu and Atrek, 2010, p. 47).

The quality of higher education as a service is also fundamental to a country’s development because universities prepare the professionals who will work as managers in companies and manage public and private resources and care for the health and education of new generations (Oliveria, 2009). According to Oldfield, higher education environment is a pure service; it provides person-to-person interaction. In this situation, customer satisfaction is often achieved through the quality of personal contacts (Yu and Wai, 2008, p. 9). Furthermore, higher education needs to keep in perspective the needs and interests of groups such as student, employers, government, alumni, parents and funding agencies, among others (Rózsa, 2010, p. 24).

Out of the stakeholders of the educational quality, students are considered to be one of the most important, as they are directly affected by the quality of service and satisfaction of other stakeholders like parents, employer, [...] is dependent upon the satisfaction of students (Ahmed et al., 2010, p. 2528). In education, students are customers who come to contact with service providers of an educational institution for the purpose of acquiring goods or services (Kitchroen, 2004, p. 19). Sigala and Baum mentioned that it becomes even more difficult to attract students, since new generation students have more influence and greater awareness as consumers, becoming more interactive and selective as regards their future (Zafiropoulos and Vrana, 2008, p. 35). But unfortunately, there are few researches on the service quality concept which can be used to improve it in Iranian universities as per expectations of students. Therefore, this study intends to assess the service quality offered by behavioral science faculties of University of Tehran in the perception of the students through SERVQUAL model.

2. Problem statement
According to Parasuraman et al. (1985), due to the unique features of service such as performance oriented, intangible, heterogeneous, inseparable, and perishable, it is difficult not only to measure service quality, but also to provide the same quality of services to all customers (Yoon and Suh, 2004, p. 342). It is also important to note that without adequate information on both the quality of services expected and perceptions of services received then feedback from customer, surveys can be highly misleading from both a policy and an operational perspective (Singh and Khanduja, 2010, p. 3300). As Parasuraman et al. stated, most of the previous service quality studies have concentrated on the general nature of service quality and its components. While the importance of quality was becoming more widely recognized, its conceptualization and measurement have typically remained understudied. To try to fill this research void, Parasuraman, Berry and Zeithaml began a series of systematic and multiphased
research program in the mid-1980s, focusing on the concept and measurement of service quality (Kang and Bradley, 2002, p. 153). So, as Bearden and Netemeyer stated, the objective of designing SERVQUAL has been to obtain an overall measure of quality, or excellence, based on customer expectations versus experience (Eastwood et al., 2005, p. 82). Researchers have examined the application of the SERVQUAL instrument for many different types of service organizations ranging from retail organizations to universities and educational contexts (Tyran and Ross, 2006, p. 358; Chua, 2004). There have been quite many attempts to apply SERVQUAL in the academic environment. For instance, Kalra et al. found a strong link between service quality and behavioral intentions of university students, including saying positive things about their school, future financial contributions, and referring prospective graduate students for employers to recruit (Bezjian et al., 2006, p. 3). The study of Tan and Kek (2004) also showed that the foreign students perceived a higher level of service quality than the local students (Tan and Kek, 2004, p. 22).

Unfortunately, no research has been conducted with the aim of conducting SERVQUAL approach in the University of Tehran. Therefore, this research was aimed to investigate the following purposes:

- measuring the quality of the offered services in the behavioural science faculties within the University of Tehran and determining its difference with student’s expectations;
- ranking the effective factors on the quality of services in the behavioural science faculties within the University of Tehran; and
- investigating and comparing the satisfaction of students in these faculties, considering their demographic characteristics.

3. Research methodology

The instrument used in the study is an adaptation of the SERVQUAL survey. The original SERVQUAL instrument was specifically designed to assess organizations and businesses in the service area (Parasurman et al., 1988; reported by Aghamolaei and Zare, 2008). But some researchers such as Aghamolaei and Zare (2008) were made some changes in that questionnaire to adapt it to an academic setting. We do the same thing in this research. This questionnaire consists of five dimensions:

1. **Reliability.** Consistency in rendering the service promised reliably and carefully.
2. **Responsiveness.** Disposition of the staff to help users and provide them with quick service.
3. **Assurance.** Knowledge, attention and skills shown by the employees that inspire credibility and trust.
4. **Empathy.** An effort to understand the perspective of the user through individual attention.
5. **Tangibles.** Appearance of the physical facilities, equipment, personnel and communications materials (Salvador-Ferrer, 2010, p. 168).

It was used in this study in order to measure the expectations and perceptions of service quality of the University of Tehran service as perceived by its students. In this survey, students were asked to rate statements that would measure their expectations...
of the services provided by an ideal service higher education organization. Then they were asked to rate another set of statements that would measure their perception of the actual services delivered to them. The instrument comprises four sections:

1. demographic data about the respondents (discipline, year of study, gender);
2. statements focused on student expectations of higher education institutions in general;
3. statements focused on student perceptions of service quality at University of Tehran; and
4. the overall service quality and the importance of the five service quality dimensions where the student were required to indicate the importance by allocating a total of 100 points to the five dimensions.

The scores for expectation and perception items were ranged from 1 (strongly disagree) to 7 (strongly agree) on a seven-point Likert scale. Therefore, if perception exceeds expectation (P > E), service quality is very satisfactory. If perception equals expectation (P = E), service quality is satisfactory. However, if expectation exceeds perception (E > P), service quality is poor (Ilhaamie, 2010, p. 41).

This study was conducted at the end of full semester in the academic year 2009/2010 in which a total of 300 students were surveyed. Descriptive statistics, paired t-test, Wilcoxon, Tukey and ANOVA were utilized to measure and analyze the data by SPSS software. The means were used to compare the students’ perceptions and expectations of educational service quality and the gap between them.

4. Results
The main purpose of this study was to asses the feasibility of the SERVQUAL in the framework of university services, through a scale designed for the purpose. The results of research are presented below.

According to Table I, the highest mean is related to “Reliability (3.88)” and after that with little difference, there are “Assurance (3.81)” , “Empathy (3.76)” , “Responsiveness (3.72)” and “Tangibles (3.64)” . Generally, the mean of student’s perception from the service quality is 3.76. As we consider, all of the service quality factors in particular and service quality in general, are more than average.

<table>
<thead>
<tr>
<th>Pair</th>
<th>Service Quality Factor</th>
<th>Mean</th>
<th>n</th>
<th>SD</th>
<th>SE mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Tangibles</td>
<td>3.6417</td>
<td>290</td>
<td>0.81318</td>
<td>0.04775</td>
</tr>
<tr>
<td></td>
<td>Tangibles2</td>
<td>3.9388</td>
<td>290</td>
<td>0.85517</td>
<td>0.05022</td>
</tr>
<tr>
<td>Pair 2</td>
<td>Reliability</td>
<td>3.889</td>
<td>286</td>
<td>0.7802</td>
<td>0.0461</td>
</tr>
<tr>
<td></td>
<td>Reliability2</td>
<td>3.706</td>
<td>286</td>
<td>0.7530</td>
<td>0.0445</td>
</tr>
<tr>
<td>Pair 3</td>
<td>Responsiveness</td>
<td>3.7232</td>
<td>286</td>
<td>0.81324</td>
<td>0.04809</td>
</tr>
<tr>
<td></td>
<td>Responsiveness2</td>
<td>3.8156</td>
<td>286</td>
<td>0.88808</td>
<td>0.05251</td>
</tr>
<tr>
<td>Pair 4</td>
<td>Assurance</td>
<td>3.81</td>
<td>286</td>
<td>0.923</td>
<td>0.055</td>
</tr>
<tr>
<td></td>
<td>Assurance2</td>
<td>3.77</td>
<td>286</td>
<td>0.860</td>
<td>0.051</td>
</tr>
<tr>
<td>Pair 5</td>
<td>Empathy</td>
<td>3.765</td>
<td>287</td>
<td>0.7856</td>
<td>0.0464</td>
</tr>
<tr>
<td></td>
<td>Empathy2</td>
<td>20.05</td>
<td>287</td>
<td>0.684</td>
<td>0.040</td>
</tr>
<tr>
<td>Pair 6</td>
<td>Service_quality</td>
<td>3.7610</td>
<td>285</td>
<td>0.51885</td>
<td>0.03073</td>
</tr>
<tr>
<td></td>
<td>Service_quality2</td>
<td>19.2383</td>
<td>285</td>
<td>2.18102</td>
<td>0.12919</td>
</tr>
</tbody>
</table>

Table I.
Mean and standard deviation of the service quality factors
4.1 Measuring the quality of the offered services in the behavioural science faculties within the University of Tehran and determining its difference with student’s expectations

According to Table II, the results of t-test for general service quality in 0.05 α-level, show that in general, the service quality is less than student’s expectations. Among studied factors, just “Responsiveness” and “Assurance” are desirable with students’ expectations and other factors such as tangibles, reliability and empathy, are less than their expectations.

4.2 Ranking the effective factors on the quality of services in the behavioural science faculties within the University of Tehran

Results of the variance analysis reveal that there are differences among mean difference. For determining factors with different means and ranking them according their significance, Tukey and Scheffe tests have been used. Findings of this test show that in the views of students, “Empathy” and “Tangible” have the most significance and after that there are orderly “Responsiveness”, “Assurance” and “Reliability” Table III.

5. Conclusion

Application of SERVQUAL instrument enables higher education institutions to identify dimensions of service where they excel or need to improve, and position their service quality in relation to their societies. The results of using SERVQUAL questionnaire in the behavioral science faculties of the University of Tehran show the negative quality gap in three of the five SERVQUAL aspects, include: tangibles, reliability, and empathy. This confirms the results of the Faganel (2010) about tangibles dimension. Negative quality gaps mean students’ expectations are greater than their perceptions and it indicates their dissatisfaction. Thus, improvements are needed across aforementioned dimensions (Aghamolaei and Zare, 2008). The finding of Arambewela and Hall’s (2006) study also demonstrated that students found the tangibles construct as having the greatest impact on their overall satisfaction. The results of Legčević (2009), Zeshan et al. (2010), Zavvar et al. (2007) do not support the results of this study. In their researches, there were significant differences between perceptions and expectations of students in all of the five SERVQUAL dimensions. Among five dimension of SERVQUAL, only in responsiveness and assurance students’ perceptions of the educational services quality were greater than their expectations and other dimensions have not been fulfilled well.

<table>
<thead>
<tr>
<th>Paired differences</th>
<th>Mean</th>
<th>SD</th>
<th>SE mean</th>
<th>t</th>
<th>df</th>
<th>Sig. (two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Tangibles-Tangibles2</td>
<td>0.29713</td>
<td>1.05365</td>
<td>0.06187</td>
<td>-4.802</td>
<td>289</td>
<td>0.000</td>
</tr>
<tr>
<td>Pair 2 Reliability-Reliability2</td>
<td>0.1822</td>
<td>0.9232</td>
<td>0.0546</td>
<td>3.337</td>
<td>285</td>
<td>0.001</td>
</tr>
<tr>
<td>Pair 3 Responsiveness-Responsiveness2</td>
<td>-0.09237</td>
<td>1.08669</td>
<td>0.06426</td>
<td>-1.437</td>
<td>285</td>
<td>0.152</td>
</tr>
<tr>
<td>Pair 4 Assurance-Assurance2</td>
<td>0.034</td>
<td>1.196</td>
<td>0.071</td>
<td>0.474</td>
<td>285</td>
<td>0.636</td>
</tr>
<tr>
<td>Pair 5 Empathy-Empathy2</td>
<td>-16.2808</td>
<td>1.0189</td>
<td>0.0601</td>
<td>-270.696</td>
<td>286</td>
<td>0.000</td>
</tr>
<tr>
<td>Pair 6 Services_quality-Services_quality2</td>
<td>-15.47731</td>
<td>1.70317</td>
<td>0.10089</td>
<td>-153.412</td>
<td>284</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table II. The results of t-test for investigating difference between student’s perception and expectation toward service quality.
to meet students’ expectations. Faganel’s (2010) results showed the highest level of perceived quality with keeping students informed about the time and place of services provided. They also feel that academic staff show respect to the students. They are satisfied with timely informing about time and place of services provided. A comparison between student’s gender and seniority did not reveal any differences and support the result of Zavvar et al. (2007) in this field.

Considering all the results in this study, further and deeper analysis may reveal the causes of such differentiations while all these good efforts should lead and be accompanied by an effective strategic plan. Behavioral science faculties at university of Tehran could benefit from this exploration and their effort are needed to alter the conditions that provoke negative quality services. A follow-up qualitative study could be may be proved an invaluable step for exploring the causes of the gaps. On the intervention level, efforts should be made in order to change dissatisfaction dimensions to satisfactory ones. Therefore, the following recommendations should be considered:

- continuous measurement of the service’s quality at university level;
- developing standards of service quality at the university;
- constant measurement of student’ needs and expectations;
- informing educating university staff about the importance of their role in the quality of university services; and
- developing plans for enhancing quality programs for further satisfaction of students.

References
Aghamolaei, T. and Zare, S. (2008), “Quality gap of educational services in viewpoints of students in Hormozgan University of Medical Sciences”, *BMC Medical Education*, available at: www.biomedcentral.com/1472-6920/8/34

<table>
<thead>
<tr>
<th></th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>60,991.146</td>
<td>4</td>
<td>15,247.786</td>
<td>23,029.735</td>
<td>0.000</td>
</tr>
<tr>
<td>Within groups</td>
<td>949.439</td>
<td>1,434</td>
<td>0.662</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>61,940.584</td>
<td>1,438</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Homogeneous subsets**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Subset for α = 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>286</td>
<td>1</td>
</tr>
<tr>
<td>Assurance</td>
<td>286</td>
<td>2</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>287</td>
<td>3</td>
</tr>
<tr>
<td>Tangibles</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>290</td>
<td>1</td>
</tr>
</tbody>
</table>

**Table III.**
Investigation of difference among means of service quality factors and ranking them according to student’s perception about service quality

<table>
<thead>
<tr>
<th>Schefte (a,b)</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>286</td>
<td>3.7065</td>
<td></td>
<td></td>
<td>0.102</td>
</tr>
<tr>
<td>4</td>
<td>286</td>
<td>3.7724</td>
<td>3.7724</td>
<td></td>
<td>1.000</td>
</tr>
<tr>
<td>3</td>
<td>287</td>
<td>3.8214</td>
<td>3.8214</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>290</td>
<td>3.9388</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>290</td>
<td>20.0386</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>0.580</td>
<td>0.199</td>
<td>20.0386</td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>


Yu, F. and Wai, B. (2008), “Using SERVQUAL to measure users’ satisfaction of computer support in higher educational environments”, dissertation prepared for the degree of Doctor of Philosophy, University of North Texas, Denton, TX.


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